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May 24, 1996

EX PARTE OR LATE FILED

William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, NW
Mail Stop Code 1170
Washington, D.C. 20544

RE: Ex Parte Presentation
CC Docket No. 95-116 -- Telephone Number Portability

Dear Mr. Caton:

Pursuant to the requirements of Sections 1.1200 et seq. of the Commission's Rules, this is to notify you that the attached memorandum regarding remote call forwarding was delivered today to Karen Brinkmann and David Wye of the Wireless Telecommunications Bureau and Jason R. Karp, Carol E. Matthey and Susan McMaster of the Common Carrier Bureau.

Should there be any questions regarding this matter, please contact the undersigned.

Sincerely,

A handwritten signature in cursive script that reads "Cathleen A. Massey".

Cathleen A. Massey

cc: Meeting Participants

REMOTE CALL FORWARDING (RCF)

1.0 INTRODUCTION

Many states are calling for the offering of Remote Call Forwarding by incumbent LECs as a short term, non-data base solution to providing service provider portability for customers wishing to change service providers and retain their telephone number. Competitive wireline local service providers have identified a number of shortcomings for this solution. Although there appears to be no requirement or need at this time for wireless to offer RCF in order to support number portability in the short term, this analysis was undertaken in order to have a better understanding of its impacts and shortcomings in wireless networks.

2.0 DESCRIPTION AND DISCUSSION

The following is a description of RCF as might be applied to wireless providers in a number portability environment and a discussion of its limitations based on today's implementations:

2.1 Call Setup - Wireline caller to ported wireline-to-wireless customer

Figure 1, Attachment 1, represents a call from a wireline end user to a number that was ported from a wireline service provider to a wireless service provider.

Subscriber A dials 935-1234 to reach subscriber B. B was previously a subscriber of the LEC. The call is directed to the LEC office where the RCF feature is invoked. The forwarded to number is 915-9429, and since the LEC office has no direct route to the MSC office that serves the 915 NXX, the call is sent to the LEC access tandem which routes it to the Mobile Switching Center (MSC) which terminates the call to wireless subscriber B.

2.2 Call Setup - Wireline caller to ported wireless-to-wireless customer

Figure 2, Attachment 1, is a variation of Figure 1. It represents a call from a wireline end user to a number that was ported from one wireless service provider to another wireless service provider in the same market.

Subscriber A dials 925-2234 to reach subscriber B. B was previously a subscriber of MSC1. The call is directed to the original MSC serving office, where the MSC will check its Home Location Register (HLR) for information about the subscriber. The HLR will show a call forwarding number for that subscriber. The forwarded number is 915-9429, and since the MSC1 has no direct route to the MSC that services the 915 NXX, the call is sent to the LEC access tandem which routes it to MSC2 which terminates the call to wireless subscriber B.

2.3 Limitations

While call termination to a ported wireless subscriber seems not to pose problems, RCF begins to fall apart in two other areas for wireless. The two areas are call origination by the ported wireless subscriber and wireless registration in a visited market.

2.3.1 Call origination by a ported wireless subscriber

Call origination by the ported wireless subscriber in an RCF environment suffers some of the same drawbacks as call origination by a ported wireline customer in a wireline environment. Because the ported subscriber's telephone number on the MSC is not the ported number, but is a MIN (mobile identification number or telephone number) associated with that switch, the Calling Party Number field on which CLASS features are based when the ported subscriber originates a call will not show the ported number, and Caller ID and features that screen on calling party number will fail at the terminating subscriber's end. Some CLASS features may not work on calls originated towards the ported number because of the nature of call forwarding. Additionally, since the MIN in the mobile station is not the ported number, without modifications the ANI for billing will not be the ported number. This will also impact 911.

2.3.2 Wireless Automatic Roaming

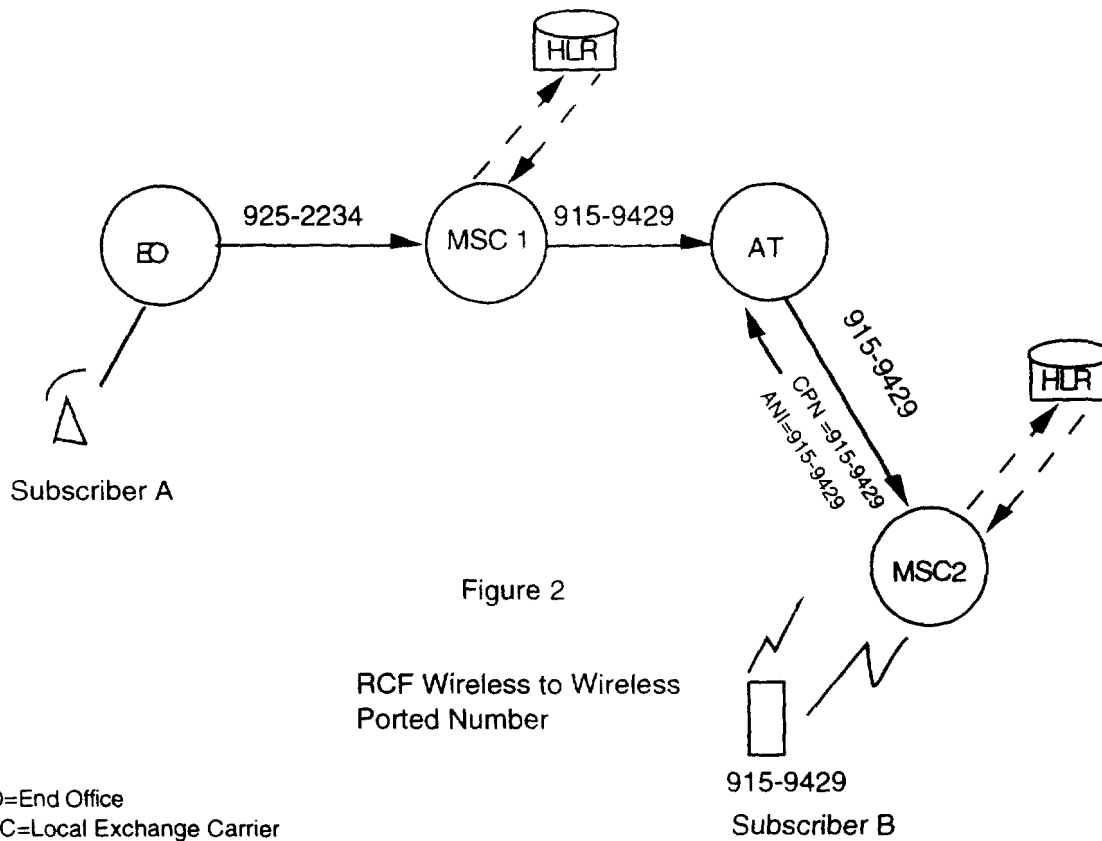
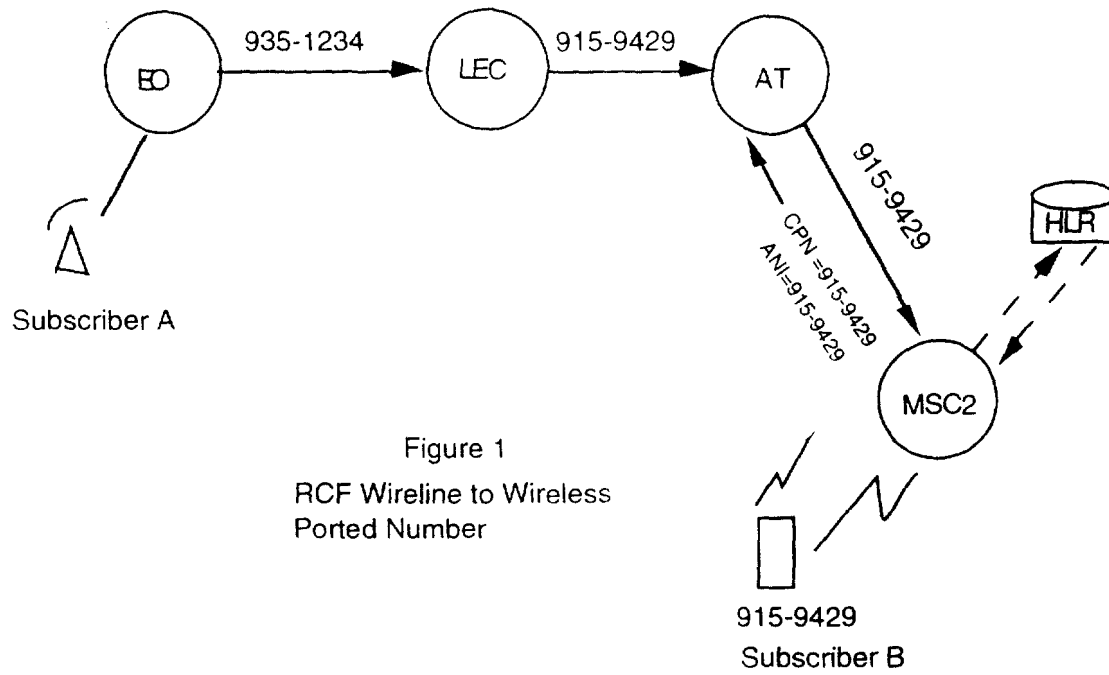
Unique to wireless is automatic roaming and the process of IS-41 registration when the mobile station is turned on. See Attachment 2, Figure 3. For an interim solution, the MIN in the mobile station must be a wireless MIN in order to retain automatic roaming capabilities as they exist and are provisioned today. When roaming in a visited market, the visited MSC does a translation on the MIN it receives from the mobile station. Based on today's procedures to support automatic roaming using IS-41, a translation is generally done on the first 6 digits of the mobile subscriber's MIN. These 6 digits are used to identify the home service provider in order to reach the subscriber's Home Location Register and complete the registration and validation process. (Based on today's code assignment procedures, cellular providers NPA NXXs are generally not shared between wireless providers.)

In order for the ported wireless subscriber to have automatic roaming capabilities as provided today, their mobile station has to support the MIN to which the ported number is forwarded. The visited switch would not be able to recognize or translate the ported number to the proper Home Location Register.

These translation issues associated with wireless registration in a number portability environment exist for long term (data base) number portability solutions also. In order to program the ported number into the mobile station and be able to identify the home service provider based on that number, the wireless industry will need to identify and develop solutions for translations of ported numbers, based on a 10 digit look-up. These solutions will have a major impact on existing wireless infrastructure and provisioning and will take time to design, develop and implement. The ability to maintain seamless nationwide roaming will require common solutions.

3.0 SUMMARY

RCF has some of the same limitations in a wireless environment as it has in a wireline environment. Consequently, it would not seem to be in the best interest, nor does there appear to be any need, for wireless service providers to offer RCF to support number portability in wireless networks.



EO=End Office
 LEC=Local Exchange Carrier
 MSC=Mobile Switching Center
 HLR=Home Location Register
 AT=Access Tandem
 ANI=Automatic Number Identification
 CPN=Calling Party Number

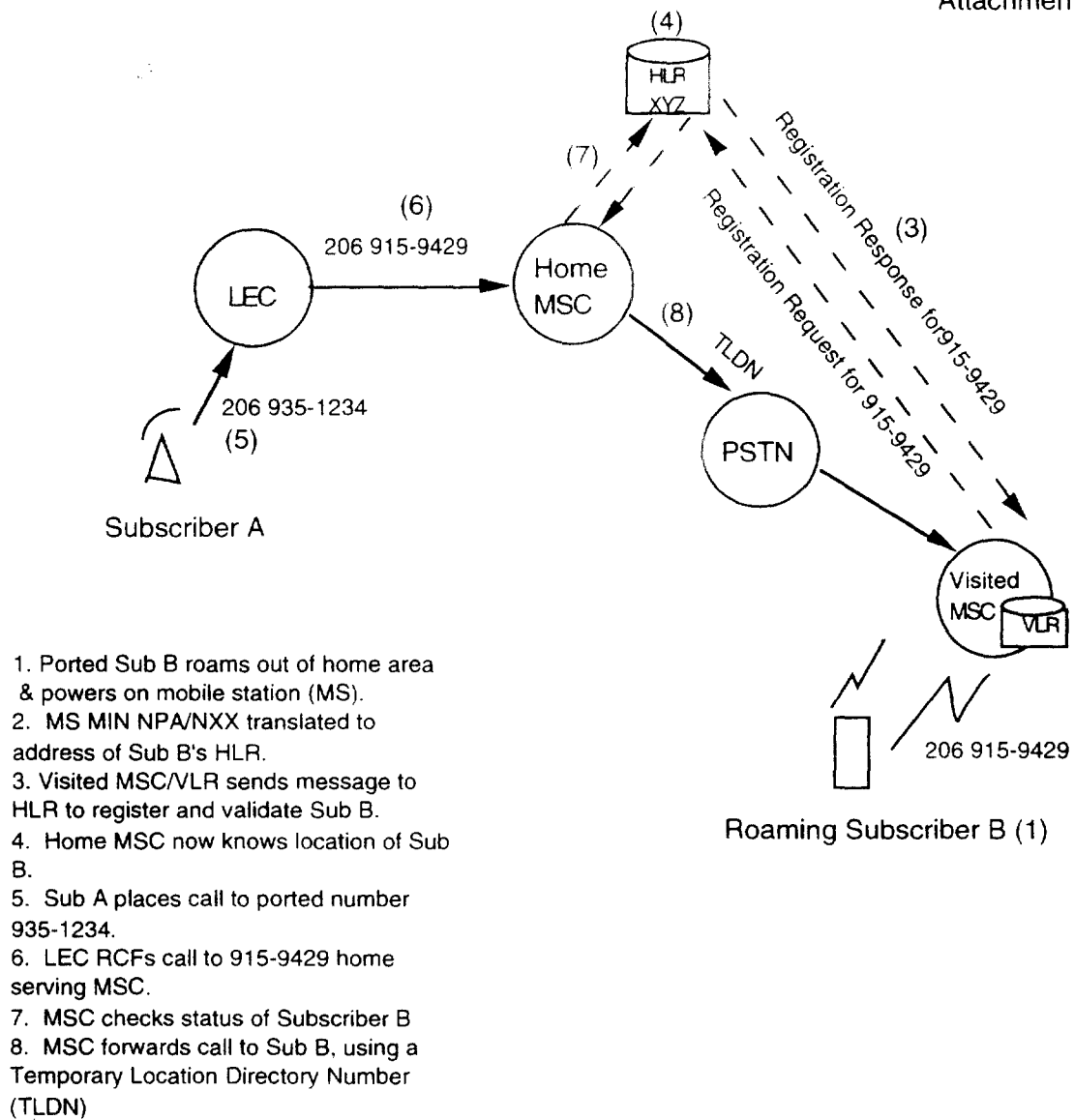


Figure 3

Wireline to Wireless Ported Subscriber
 Registration and Call Delivery While Roaming